

ABSTRACT OF THE INVENTION

A spool comprises: a hub sandwiched between two flanges. At least one of the flanges includes at least one smoothly curving arcuate fiber groove on a side facing the hub. The fiber groove extends substantially to the outer edge of said flange. The groove is situated at a shallow angle θ relative to the tangent line to the periphery of the flange, the angle θ being no more than 15 degrees.